

AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A process for producing enzyme particles, which process comprising:

providing an emulsion of droplets of a first liquid phase dispersed in a second liquid phase, with the one liquid phase being a hydrophilic phase and the other liquid phase being a hydrophobic phase which is immiscible with the hydrophilic phase, and with enzyme molecules being located at or within interfacial boundaries of the droplets and the second liquid phase;

cross-linking the enzyme molecules of the respective droplets so that individual enzyme particles, which are stable and in which the enzymes are immobilized with a majority of active sites of the enzymes being orientated either internally or externally, are formed from individual droplets; and

recovering the individual enzyme particles from the second liquid phase.

2. **(Previously presented)** The process according to Claim 1, wherein the individual particles have openings so that the liquid phases can pass in or out of the particles.

3. **(Previously presented)** The process according to Claim 1, wherein individual particles are liquid impervious.

4. **(Previously presented)** The process according to Claim 1, further comprising adding to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion, a modifier for modifying the hydrophobicity and/or charge of the enzyme.

5. **(Previously presented)** The process according to Claim 1, wherein the enzyme is a lipase.

6. **(Previously presented)** The process according to Claim 5, wherein the lipase is selected from the group consisting of *Pseudomonas cepacia* lipase, *Pseudomonas fluorescens* lipase, *Pseudomonas alcaligenes* lipase, *Candida rugosa* lipase, *Candida antarctica* lipase A, *Candida antarctica* lipase B, *Candida utilis* lipase, *Thermomyces lanuginosus* lipase, *Rhizomucor miehei* lipase, *Aspergillus niger* lipase, *Aspergillus oryzae* lipase, *Penicillium* sp lipase, *Mucor javanicus* lipase, *Mucor miehei* lipase, *Rhizopus arrhizus* lipase, *Rhizopus delemere* lipase, *Rhizopus japonicus* lipase, *Rhizopus niveus* lipase, and Porcine Pancreatic lipase.

7. **(Previously presented)** The process according to Claim 5, wherein the provision of the emulsion is effected by dissolving the enzyme in the hydrophilic or W phase and forming the emulsion by mixing the enzyme containing hydrophilic phase with the hydrophobic or O phase.

8. **(Previously presented)** The process according to Claim 7, further comprising selectively precipitating the enzyme at the interface when the emulsion is a O/W emulsion in which hydrophobic phase droplets are dispersed in a continuous hydrophilic phase, or within the droplet volume, when the emulsion is a W/O emulsion in which hydrophilic phase droplets are dispersed in a continuous hydrophobic phase.

9. **(Previously presented)** The process according to Claim 7, wherein the cross-linking of the enzyme molecules is effected by means of a cross-linking agent which is added to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion.

10. **(Previously presented)** The process according to Claim 9, further comprising adding to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion, a temporary protectant that occupies active sites of the enzyme during the cross-linking, thereby inhibiting occupation of or reaction with the active sites by the cross-linking agent.

11. **(Previously presented)** The process according to Claim 7, further comprising adding an amino acid to the emulsion to inhibit agglomeration of the individual enzyme particles.

12. **(Previously presented)** The process according to Claim 7, further comprising recovering the enzyme particles from the second liquid phase.

13. **(Previously presented)** The process according to Claim 7, further comprising extracting the first liquid phase from the enzyme particles.

14. **(Previously presented)** The process according to Claim 7, wherein the hydrophilic phase comprises water.

15. **(Previously presented)** The process according to Claim 7, wherein the hydrophilic phase comprises a polyethylene glycol.

16. **(Previously presented)** The process according to Claim 7, wherein the hydrophobic phase comprises an oil; a hydrocarbon; an ether; or an ester.

17. **(Previously presented)** The process according Claim 7, wherein the emulsion is a W/O emulsion in which hydrophilic phase droplets are dispersed in a continuous hydrophobic phase, with a second enzyme, co factor and/or mediator being present in the hydrophilic phase.

18. **(Previously presented)** The process according to Claim 5, wherein a triglyceride, which is hydrolysable by lipase, is used as the hydrophobic phase, with an O/W emulsion, in which hydrophobic phase droplets are dispersed in a continuous hydrophilic phase, being formed and with the dispersed hydrophobic phase contained within the cross-linked particles being hydrolyzed by the lipase during and after the cross-linking reaction.

19. **(Previously presented)** The process according Claim 7, wherein an initial O/W emulsion, in which hydrophobic phase droplets are dispersed in a continuous hydrophilic phase, is formed, with the process including, before effecting the cross-linking, centrifuging the emulsion and separating a concentrated emulsion from a dilute hydrophilic phase, to increase lipase purity; and inverting the emulsion to form a W/O emulsion in which hydrophilic phase droplets are dispersed in a continuous hydrophobic phase, by the addition of a surfactant with a lower HLB value.

20. **(Previously presented)** The process according Claim 1, wherein, to impart specific properties to the enzyme particles, a modifier is added to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion.

21. **(Previously presented)** The process according to Claim 20, wherein the modifier is a surfactant, for imparting enhanced enzyme activity and improved emulsion stability.

22. **(Previously presented)** The process according to Claim 20, wherein the modifier is a precipitator for precipitating the enzyme onto the emulsion interfaces.

23. **(Previously presented)** The process according to Claim 20, wherein the modifier is an additive for modifying the pH; ionic strength; viscosity; magnetic properties; agglomeration tendency; and/or zeta potential of the emulsion and/or the enzyme particles.

24.-29. **(Canceled)**

30. **(Previously presented)** The process according to Claim 14, wherein the hydrophilic phase further comprises a buffer in the water.

31. **(Previously presented)** The process according to Claim 15, wherein the hydrophilic phase further comprises water admixed with the polyethylene glycol.